

Best for Software  
every week

An Argus Specialized Publication  
AUGUST 8-15, 1995 No. 27



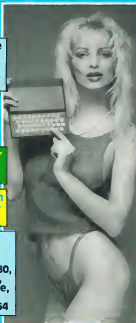
**Games to type  
in for:  
Spectrum,  
TI-99/4A, Oric,  
VIC-20**

**Special:  
Microdrive  
review.  
Page 11**

**Help with your programming**  
— page 14

**Fast work with  
your ZX81 →  
page 16**

**Pages of  
reviews for:  
Spectrum,  
TI-99/4A, TRS-80,  
Dragon, BBC,  
Atari, Oric, Ace,  
VIC,  
Commodore 64**



## The men behind the Microdrive

A four-man team who will be led by Sir Clive Sinclair and headed it into the Microsoft main storage devices.

Heading the team was research and development director David Southwood who said, "It's been a difficult project with a lot of problems to solve."

"It has taken a lot longer than we hoped. But we know it would be difficult because we were doing things which people would not see fit to do."

Mr. Southward, 48, began work on the medicinal cake before the Government was launched.

© 2005 Blackwell Publishing Ltd *Journal of Internal Medicine* 258: 103–110

## New game: what the Yard says

Standard Yards is rolling an on-line version of a non-computer game called *Mindful*.

It dominates a channel called *sluery*. It flows along what ancient Romans would have called *putei* and *putei* and *putei*.

It has a long life — and it has a rich and colorful past — but it is not a very common sight in the United States. It is a plant that is native to the tropics and is found in many parts of the world.

† Available to users of the e-journal version  
‡ Downloaded from <http://www.elsevier.com/locate/jbiotec>

Year	Number of cases	Number of deaths
1990	100	10
1991	120	12
1992	150	15
1993	180	18
1994	200	20
1995	220	22
1996	250	25
1997	280	28
1998	300	30
1999	320	32
2000	350	35
2001	380	38
2002	400	40
2003	420	42
2004	450	45
2005	480	48
2006	500	50
2007	520	52
2008	550	55
2009	580	58
2010	600	60
2011	620	62
2012	650	65
2013	680	68
2014	700	70
2015	720	72
2016	750	75
2017	780	78
2018	800	80
2019	820	82
2020	850	85

ocean

**THE NEW YORK PUBLIC LIBRARY**

THE UNIVERSITY OF CHICAGO

# KONG

## ARRANGED

**FRUIT £5.90**

[illegible]

© 2000 Blackwell Science Ltd *Journal of Internal Medicine* 247: 395–402

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

LOOK  
FOR THE  
'ULTIMATE' NAME  
FOR THE  
'ULTIMATE' GAMES

'COOKIE'



PLAY IT YOURSELF

'JET PAC'



PLAY IT YOURSELF

'PSSSY'



PLAY IT YOURSELF

'TRANS AM'



PLAY IT YOURSELF

'TRANS AM'

£5.50 each

THE 'ULTIMATE' NAME FOR THE 'ULTIMATE' GAMES  
PLAY IT YOURSELF  
THE 'ULTIMATE' NAME FOR THE 'ULTIMATE' GAMES  
PLAY IT YOURSELF

© 1985  
GAMES

## BUY THIS SPACE.

To advertise  
your latest product?  
Ring Colvin or Barry on  
01-437 1002 NOW!

# Home Computing WEEKLY

News ..... 5,9,9,9

One Man's View ..... 8

Software reviews ..... 10

Comes to drive you on

Micro-drive reviews ..... 11

Does it live up to its promise?

Spectrum program ..... 12

Stop shop, not hearties

Micro Tips ..... 14

Advice for a range of home computers

BBC software reviews ..... 15

The good — and the not so good

ZX81 programming ..... 16

How to write fast moving games

Software reviews ..... 19

The old starts the new

TI-99/4A program ..... 20

Try to beat the ship

Oric program ..... 23

Another chance to see the earth

Spectrum software reviews ..... 25

Software set at speed

VIC-20 program ..... 27

Fled that program last

Best sellers ..... 29

Churn for ZX81, Dragon, VIC-20, Spectrum

U.S. Scene ..... 35

Software reviews ..... 30

A galaxy of games

Profile: Ultimate Play the Game ... 32

With a name like that

Letters ..... 33

The change you tell us

Artistic Editor  
Paul Lister  
Assistant Editor  
Cathie Goodwin  
Designer  
Brian Pritchard  
Managing Editor  
Eun Harris

Advertisements Manager  
Colony Price  
Assistant Advertisement Manager  
Barry Stephens  
Classified Advertising  
Budgetary Manager  
Managing Director  
John Cresswell

Apex Specialist Publications Ltd

140 Charing Cross Road, London WC2H 0EE 01-437 1002

Home Computing Weekly is published fortnightly. Distribution by Apex Press  
Sales and Distribution Ltd, 10-14 Paul Street, London EC2A 4EB. Printed by  
Kilnmead Presswork & Print Ltd, of London and Huddersfield. Also: Design and  
imaging by Fold Design and Print, 143 Charing Cross Rd, London WC2H 0EE

FREE SPECTRUM  
CATALOGUE  
14 pages of Spectrum lists.  
Call 01 437 1002  
Have names & address ready  
10-15p this  
SOFTWARE SUPERMARKET



# SATISFY YOUR SYSTEM



**WHICHEVER YOUR SYSTEM  
WE HAVE THE RANGE OF BOOKS & TAPES  
TO MEET YOUR REQUIREMENTS**

Distributed through bookshops, Computer shops and selected chain and multiple stores  
DISTRIBUTORS TO THE TRADE, SOLE UK DISTRIBUTOR OF SYBEX BOOKS,  
TRADE ENQUIRIES WELCOME

**The Computer  
Bookshop**



30 Lincoln Road, Olton, Birmingham B27 6PA Tel: 021-707 7544

Continued from front page



Microdrive men (from left) — Ben Chess, Martin Brennan, John Williams, David Southwood



He said: "Clive said 'What we want to do is this' and I went up with various wires of choice. If there were perhaps a dozen different ways."

"The satisfaction is not when it's finished but when a year or so has passed and there's plenty of thousands of people with them."

"That's what really counts, that's what it's all about."

Mr Southwood, who works at Rankin Ltd, has laboratory, was recruited by Mr Clive from his earlier company, however the division, which has been taken over by the National Enterprise Board after running into recent trouble.

John Williams, a colleague at S. has also worked with Mr Southwood on the ZX Printer, looked after the detailed mechanical design and Ben Chess and Martin Brennan, both based in Cambridge, were responsible for the electronics and software respectively.

They have also spent a lot of time in the manual development to get production under way.

Microdrive, which cost £49.95 each, have a 12 month warranty and run tape at 15in cartridges at 30in, it scored with a claimed maximum storage capacity of 858.

Each cartridge, costing £4.95, contains 200 of tape — similar in quality to video tape — with two tracks on a width of a little over one twentieth of an inch.

The Microdrive have to be connected to Spectrum via the ZX Interface 2, costing £29.95 with Microdrive, or £49.95 separately.

As well as introducing up to eight Microdrives, the unit also provides the industry standard RS 232 interface — allowing the

■ Microdrive review — see page 11

Seamus Fawcett, Canterbury, Surrey, 0273 188



computer to be linked to other computers and peripherals such as printers — and a network of a maximum of 64 Spectrums, provided none is more than 300 feet.

A handful of software houses has already got the new copy made as they can produce software on cartridge.

Spectra's marketing director, Nigel Hawley, said: "Initially there's not going to be a huge market. Although there will be a million Spectrums out there, there are not half a million Microdrives."

"I would think that it will follow the same pattern as



music software. I would guess that someone will set up a duplicating service for Microdrive cartridges for the software companies."

Mr Clive, questioned later about the Government's approach to computers, said that the fifth generation computers needed a central laboratory employing the country's best minds.

He said: "It needs to be done on the same principle as the main bank."

"The new industrial revolution is as dependent on new technology as the first was on the transportation of men."

## You could be on our pages

We welcome program articles and tips from our readers.

**PROGRAMS** should, if possible, be computer printed to a width of 80 characters (type a new ribbon and/or sent on cassette). Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.

**ARTICLES** on using home computers should be no longer than 2,000 words. Don't worry about your writing style — just try to keep to the style in *NCW*. Articles most likely to be published will help our readers make better use of their money by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

**TIPS** are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Upriot, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0BB

Continued from front page

came all at 15.45 and out from Appleby Court, looking none at all like a politician.

Ministering director Chris Muller, 25, said he and his brother and fellow directors, Gareth and Chris, thought hard before deciding to bring up the price.

It was clear to be an unrepentant Yorkie student and originally, said Mr Muller, there was a certain amount of blood and no amount of down. "The police were approaching from the ground."

Mr Muller said: "We finished at 11 in April. At first we were not going to market it. We actually thought it might be a waste of time."

But now people grab you. You have no chance of someone you like a politician. There is a chance of getting away if you think a minute.

There is always the problem of people being encouraged by these things. But I think it will

keep them at first computers all day rather than showing money to windows.

He kept the name Harry O'Hoodless will not encourage people to think only look people think about it.

A Scotland Yard spokesman said: "Obviously, anything which encourages people to go out and do the sort thing is a bad thing."

"London is a very big problem in London. Last year, unauthorised damage amounted to eight per cent over 1981, from £7,000 to £10,000 in the Metropolitan Police area."

"We have not come across it, so it is not only as big as it will have any harmful effects on young people."

Against a policy that says which have and have been limited on these young people. "Spice, Mike, Mike, Mike and Lorie" and a volume of frozen called 7A, France.

Shelley, 154, James Street, London E15 1JF

## Commodore: VIC-20 goes on — and up

Commodore, reporting to retail and service outlets, has completed a report that VIC-20 production is to ease slowly.

Marketing boss John Bland stated: "Any customer you hear about as waiting for the VIC is accurate."

Sell more frequent inquiries and Commodore said they were now shipping to the Commodore 16, which has 64K for the new price of \$129. The new package VIC-20 has 16 K and costs \$119 for a package which includes a cassette recorder.

Bland is keen to bring out a VIC-20 success game called *Revenge* and several western titles. *Exotic* real. "We are not going to do any more games for the VIC."

"They say to stop making it this month. I'm not being dramatic about Atari, but it's my perception that the VIC has only a limited life."

"It's cheaper for them to make a 40K than a VIC and also the VIC is totally out-classed by the Spectrum and Cric — even the Atari — on price and performance."

Mark Tyler, a Commodore director, said his company had no reports about VIC-20 production coming to an end.

He said: "We are no longer actively looking for games for the VIC-20. We are looking for the 64. It seems to be filling the gaps the market at around the £200 mark."

Mr Bland said retailers may have got around because Commodore in America had stopped taking orders for the VIC-20 — the only feature of the demand.

He said: "You have got 10 plus months in advance and they took so many orders for the VIC — and they planned to make a million — that they had, not materials, closed their order books."

"We are beginning to get into the same situation as the UK. We

are fairly certain we can sell all our computers until the end of December. We put forward international sales targets."

"We are even taking other comments to be on hand if they don't want all of them. It is a possibility that not only will we be producing until Christmas but we have after."

"If we are not able to sell without a VIC, to give us some idea, we sold 70,000 in June — along with 10,000 sets — and we could have sold a lot more VIC's than that. We can sell more than we can produce."

"We are forecasting over at least 15 million VIC programs for the end of the year."

And then when Mr Bland had to say about the competition: "Main only are we out selling Sinclair, we are outpacing them in the UK. We will be able to do this in the UK, not yet, but we will."

"We believe that in the UK we are selling 70 per cent by value and 80 per cent by unit by volume."

This month Spectrum and ZX81 sales totalled 32 per cent of sales by value and Commodore's was 30 per cent by volume.

He said: "We are not sure whether we will lose him by volume this year but we will lose him by value. We are selling more in America than Sinclair with worldwide."

Commodore, he said, had 10 per cent of the US market, selling his computers.

## Hitch for mail order plan

The Computer Trade Association has now made a survey with a proposed building scheme to get mail order customers.

General secretary Nigel Blackford said: "Two of the most important computers we have spoken to have turned it down because there are too many variables at the moment."

"If I had a few more orders to go to level 4, which would mean the scheme would cost more." The CTRA hopes to start the possibility of a building scheme — financed by the 10 or 20 cost plans — after meeting between 100 and 400 letters. Customers could claim for loss of service.

Now it is planning a conference, probably in September, where software houses, magazines and the Department of Trade could discuss the issue.

Computer Trade Association, 100 Margaret Street, Cardiff, Area 104 2L2.



The Aquarius — with player Miss Expendable (right) and Home Controller. Two creative individuals for home applications are on the left.

## Micros amongst the groceries

Computers will now be on sale in TV food shops and alongside groceries in supermarkets.

Radio Rentals are last to market the J79 65 Aquarius, the goods and news. And Audio, the long-established chain run by Associated Distributors, has agreed to sell the computer. So have other stores.

Mike Litch, managing director of distribution Microtel, said: "Radio Rentals are last to market the goods and news. And Audio, the long-established chain run by Associated Distributors, has agreed to sell the computer. So have other stores."

He said: "It's put the computers where the people are, not where the experts are."

But retailers had to carry a wide range of peripherals, make demonstrations, have staff training and have enough staff to handle the extra work to make it worthwhile.

He said he must use the computer going on sale to 125 shops and franchisees, saving a new and cheap local machine designed for the family.

Microtel officially launched the Aquarius last week. The basic unit costs £150. The 65 with 45 Kbytes of RAM costs £175.

And available in launch include a thermal printer (£179.95), cassette recorder (£49.95), Micro Expendable with green controller (£49.95), and 16 Kbytes of RAM (£29.95).

There are 256 graphics characters, 16 colors on screen and a resolution of 320 by 192 pixels, or 40 by 20 characters.

Microsoft BASIC is built in

and a range of games, education and house management cartridges will cost £19.95 to £49.95. Several high-resolution color image games have been adapted for the Aquarius.

■ Microtel also demonstrated a home control system which, on top of the Aquarius, will control lights, appliances, and hot heating and air in the domestic house. A Microtel video unit and two modules will cost about £100 when available in the UK early next year.

The modules are plugged into wall sockets and appliances connected to them. And the Home Controller sends signals along the power-carrying lines to turn on or off.

Microtel said up to 256 up-plugs can be controlled for up to 32 on/off switches in scheduling cycles. Graphics made the use on programming the unit.

Mr Litch said the advantages included energy saving, security and convenience.

Micro Electronics, 1 Fallow Road, Wembley, Middlesex UB9 6AT.

## US giant plans TV software ads

American company Parker Video Games is moving into home computer software, and plans to spend \$2 million over the next few months to produce more in the UK.

Televisions ads will tell British buyers about Parker's programs for the Atari 400 and 800 and VIC 20, as well as for dedicated games machines. Parker Video Games, Parker Drive, Street, Cardiff, Area 104 2L2.

## Where to take those upgrade problems

We have had a number of letters from readers with problems regarding upgrades from the 16K to the 64K Spectrum. It should be said, that the advice given to a Sinclair user is to upgrade before attempting to use the 64K Spectrum.

Seeley Research, Seeley Road, Cambridge CB3 0LU, UK.

**NOW AVAILABLE FROM W. H. SMITH  
AND BOOTS**

# EVEREST ASCENT

48K Spectrum

**A graphic simulation of man's ultimate endeavour!**

Stake your claim to the Top of the World in this strategic vertical adventure. Aim to conquer the 29,141' summit of the world's highest peak ... struggle from base camp to base camp ... survive the elements ... watch out for avalanches, thin ice and wayward sherpas ... encounter abominable snowmen and cross bottomless crevasses!

A game of skill, strategy and planning for those with a head for heights!

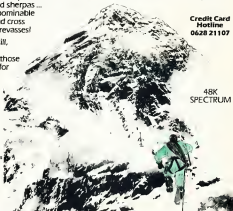
**Only  
£6.50**

**Credit Card  
Hotline  
0628 21107**

**48K  
SPECTRUM**

Can you write  
games like this?

If so, why not  
send a sample —  
we offer generous  
cash rewards!



DEALER ENQUIRIES WELCOME — EXCELLENT DISCOUNTS AVAILABLE  
WRITE OR RING JOHN SALTHOUSE ON 0628 21107

**RICHARD SHEPHERD SOFTWARE**  
FREEPOST, MAIDENHEAD, BERKS SL6 5BY.





## Dragon extros

Elcom has introduced three new products for use with the Dragon.

To help with your programming, there's a quick reference guide which fits neatly into your pocket.

It consists of 16 cards joined together, containing word, and containing all sorts of useful facts, tied up in a memory map, system commands, control codes, special keyboard keys, and enough more besides.

## Teaching with animal magic

Four or six pages make *Animals Fun in Fables* by Widge Soft, makes your Spectrum sing for young children aged three to eight.

A rabbit has to eat its way through a maze of carrots. A Locomotive can be programmed to stop on way through a maze by means of a remote control. A cowboy must be guided through a path to his prize, in a certain order. And there's a frog who has to get across a lily pond, collecting friends along the way — but without landing on any waterlilies.

Each game has two difficulty levels and coloured graphics.

You can see *Maths Master* which costs £5.95, at the ZX Fair in London on August 20.

*Bridge Software*, 41 Duxton Road, East Finchley, London N3 3DT.

## Control with no strings attached

Don't get your Dragon Locomotive confused with the Spectrum.

It works by sending an ultra red signal to an interface which plugs on to the Spectrum's main connector, and will actually control any game designed for *Amiga* one joystick.

Let's see, Locomotive began to develop a multi-processorable device which any Spectrum game can be played by remote control. One and VIC versions are on the way.

Locom is also working on a duplicate keyboard for the Spectrum, for use in two-player games, and a 48K Spectrum-alike, a game called *Monon* says Mr Dave Watson.

It's a 3D graphic adventure in which you must follow in Sherlock Holmes's footsteps and solve 28 cases.

Locom, 112 Chancery Road, Birmingham B2H 9AT.

The guide is a joint effort by Elcom and US firm Naxon Systems, and apparently contains some information that hasn't yet been published anywhere else. Price: £3.95.

Secondly, the Dragon Crashes operating program will convert most Dragon programs for use on the Sandy Colour computer — or, more to the point, convert binary files and machine to the other. Price: £7.95.

Finally, for keen game players there is the Quik-shoot self-orienting joystick controller, with positive response for button and constant grip.

The one-offer plugs directly into the Dragon — no need for adaptors. Price: £15.95 each, or £26.40 for two: £44.90 each for Atari 400 and 800, VIC 30 and Commodore 64. *Elcom Electronics*, 41 Duxton Road, Finchley, Middlesex N3 3DT.

## From book to software

Book publisher Collins has followed into the educational software market with a range of children's programs for the Spectrum.

Starting with pre-released children's *Wendy's Wheel's The Times*, there's *Spaceman First* Hamilton, a counting program for four to six year olds. Both were written by primary school teacher Peter McIlroy, and cost 45p.

For seven year olds onwards, *Spectrum Know Your Tables* aims to put the fun back into table learning. Written by David O'Brien, the cost is again 45p.

Lastly, Peter McIlroy has produced a *Spectrum Game Wren's* *Maths* for children of 11 and over how to design and write their own games. Some ready-made games are also included. Price: £1.

*Collins Educational*, 1 Bankership Place, London SW1.

## Sixty-four varieties

It's no surprise to find that The Fox Four Supplies Locomotive specialists on products for the Commodore 64. In particular it is selling a range of 64 software imported from the USA.

Its range includes two word processing packages: *Script 64* and *Text*. There's a music synthesiser, *Music 64*, a file manager, *Range File*, a database system, and *Backup* which allows backup copies to be made for VIC or 64 software. *The Fox Four Supplies Company*, PO Box 49, Whiteale, June £7.95 123.



Pack away your Spectrum

## Spectrum just in case

Though Dragons have brought out a briefcase specially designed to store your Spectrum and accessories, and to double as a mobile lab.

From the outside, it looks like an ordinary black briefcase. But the lid lifts off and inside there's a raised support for the Spectrum, holding for the power

pack, recess for printer and tape recorder and a section for a 15 amp plug. There's also room for an cassette and printer paper.

A switch panel allows you to turn the power on and off from the console.

The computer case only £47.45 including postage.

*Thompson Design*, 41 Whitmore Road, Bromley, Kent.



Sord's 160 — pure 16-bit design

## Sord slash

Sord has slashed 500p off the price of its new 160 model, just a few weeks after the UK launch.

General manager Yoshio Matsubara gave two reasons for the price cut.

► Economies in the metal trade. 500p Sord (the original price was

£299.99) for built-inness and stability.

► Sord's efficient plastic in Japan had brought costs down.

Newbie MS marketed by CCL, costs £199.99. And people who bought at the higher price are being offered Sord's BASIC 2 cartridge usually £35, free of charge. *Sord, General Manager, 31 Whitmore Road, Bromley, Kent*.



# Microdrive: does it live up to the promises?

Can it really be true? After 14 months of "coming soon" Sinclair's Microdrive have at last arrived. But alas, the realization of that fact required what a review might termed up to any location the day following the launch.

The equipment arrived without the colourful packaging now associated with Sinclair's products.

I got down to a close examination of these Class 1 items as soon as possible.

As you may wish to treat this as an interface to memory as per the Microdrive. The unit provided a double 2K interface (1), and you can cut up to eight Microdrives with this interface. This unit is black, rectangular and weighs only 100gms (the same as the Spectravideo) and there is no sound.

It is built as only deep at the front, and one inch at the back. This design shaped into the Spectravideo, including the keyboard to a gentle forward angle, making the keys easier to read.

A black connector fits on top of the interface and is fitted into the Spectravideo's rear port. Before doing this, one of the screws on the underside of the Spectravideo should be removed, then are replaced by screws on the interface which lock the unit into position under the Spectravideo.

There are four connectors at the back of the interface. There is a duplicate of the Spectravideo rear port for the ZX Printer and other devices, a serial port (inside RS232C socket) and two 3.5mm jack sockets.

The jack sockets are for the network system. While the Microdrive has received all the publicity, this latter feature is fairly on the margin but also it is possible, certainly, the potential of the Spectravideo.

For the ZX Spectrum you can communicate with other Spectravideos. This is done with the interface unit. For example, through this system Spectravideo can access a Microdrive, or use a printer connected to another Spectravideo, or transfer programs of data.

The RS232C interface allows the Spectravideo to be connected to a number of devices including professional printers and modems.

On the side of the unit there is the port for the Microdrive. A flexible cable is provided to link the interface and Microdrive.

## In the first full review, David Nowotnik gives his verdicts on Sinclair's new mass storage device, and the interface unit

The ZX Microdrive looks very similar to the prototype appearing in photographs a year ago. It is 11 cm deep, 11 cm wide and a single inch tall. As the front is the side for the cartridge and an LED indicator light, which helps to indicate the device is in operation.

From top and bottom of the Microdrive. From the front the first cable linking it to the interface is fitted on the right side. A solid black connector provided with each Microdrive fits into the other port to which a second drive can be fitted.

Using these solid connectors, you can have up to eight drives in a row.

The big news — is it a tape or micro-floppy disc? — was revealed in HWA two weeks ago. The system is a combination tape. The cartridge is no bigger than a book of matches, 1.94 in by 1.94 in by 1.4 in.

Therapeutic electronic growth of the back and neck and a long black cable (1.94 in).

The interface unit has an integral ROM which allows many existing commands to be modified for use by the Microdrive and the RS232C port.

For example, the command RUN (which immediately after power up, or NEW) will automatically LOAD a program with a filename of "run" from Microdrive No. 1.

Each program appears on the Microdrive cartridge provided with the Microdrive. This program explains the purpose of the other programs on the cartridge, all of which demonstrate uses of the unit.

Particularly useful is a program called "Demo prog", which runs a demo tape (the cartridge) to explain the syntax and purpose of all commands used in conjunction with the RS232C interface. Not the Microdrive.

The command to LOAD the program from the drive is "LOAD" or "L". "Demo prog" the special "L" indicates the LOAD program to a Microdrive and the figure code indicates drive No. 1.

The system of SAVE, VERIFY and MERGE is similar.

The Microdrive is fast — but not as fast as the interface. The fastest access rate is claimed to be 3.5 seconds. However the actual time to load the display and transfer data (15%) is only 1.5 seconds. 10% of programs plus variable cost, 30 seconds to LOAD.

Part of the demo cartridge provides the check of SAVE/VERIFY and ERASE. It took 14 seconds to SAVE and VERIFY a 7K file, and 14 seconds to erase it.

The Demo program on the demo cartridge took 14 seconds to load the Microdrive when requested. Loading times were very variable. The time to load 40 seconds to LOAD on one occasion, 16 seconds on another.

Times on load file varied by week three months, and 45 seconds if you ask for a non-existent file (you have to wait 45 seconds for the "file not found" error message).

The demonstration LOADS standard records into RAM is one of the fastest (faster) to

LOAD a complete file in an instant.

The CAT command will display on the screen and send to any other output device the file names of programs and data on a cartridge, and show the program map stored on the cartridge.

Formating a blank cartridge first must be done before use for write and use (CAT reveals that only 49% is available on each cartridge). This is a standard loss from the initial promise of 100%, although Sinclair guarantees that each cartridge will hold 70K, as it can be reformatted for use again.

The review unit was accompanied by a new 44K Spectravideo. When this unit was sent to me to return reviews of the Spectravideo would not work with this.

But, after looking up the Spectravideo to the interface and Microdrive I can reveal that all was well. It worked as well as the latest new Spectravideo.

Two years ago, some can remember that the same device was nicknamed "wonder Spectravideo", made their way, and from America.

Despite their very competitive price compared with other drives, they never caught on.

However, the strategy of "play" bearing the Sinclair brand name is a constant.

A lot more is going to be done. But I found that to find a spare load drive data access and very great on SAVING and LOADING.

Time will tell on the reliability of the Microdrive and the debate on loading tape, but the old program — if you buy Microdrive and interface together — is the best opportunity the average Spectravideo owner will have to upgrade to a more powerful device.

It will be particularly attractive to those who have a spare loading unit for their computer.



A Microdrive connected, showing how the cartridge is loaded.







## Wall B £9.95

Program Power, 1/EA, Regent Street, Chapel Arden 440, Leeds LS2 4PL

One of the many thousands of arcade games, and not a particularly outstanding one at that.

One of my criteria is whether it is better than versions published in a better. This game, although providing plenty of options, is not as good as some I have tried.

The program loaded fine and ended in two versions. The

connection (which can be changed on future versions) than the game.

Colors, graphics and sound are good, and control keys are efficient. But I found that I soon became bored with it. There isn't even a high score hall of fame feature.

R.E.

instructions	90%
playability	40%
graphics	45%
value for money	30%



## Bouncer B £8

A.R.F., 100 Hyde Road, Manchester M18 7TD

You control a 'cannon' and shoot the

bouncing alien, who changes this planet, are tackled. But if the cannon you control is slightly off centre then the cannon is half destroyed.

If you destroy the alien off balancing beam before the alien reaches that last shot

## Painter B £8

A.R.F., 100 Hyde Road, Manchester M18 7TD

This is one of my top three favorite games without a doubt! A paint roller has to be steered around some 'walls' in order to colour them in. It isn't that simple, however, as there are ghosts trying to stop you and who destroy your roller if they do.

With only three colors and with over 2000 unique patterns to paint, it's a bit tough — but the ghosts are

really tricky and more cunning than most 'intelligent' as you go on. If it seems they can follow you but not see behind you!

This game has high odds this value. One of my games played it all 2 am. It's fun, colorful, responsive and has some of the nicest sound effects you've ever heard.

B.C.

instructions	80%
playability	100%
graphics	90%
value for money	100%



## Swoop B £8.95

Program Power 1/EA Regent Street, Chapel Arden, Leeds LS2 4PL

A very limited version of the Quasimodo arcade game, with only a couple of descending aliens in a full.

Bouncer is landing they do not return to the peak but require also destructive exploding eggs.

There are eight phases of 'shoot' at various difficulty. Colors and sound is good, but graphics tend to be 'blocky'.

The keys are responsive and easy to use.

# Should you switch on to these BBC games?

It just goes to show that a good micro doesn't guarantee a good game

who who (and parent) is gone.

The first two shots are easy enough, with fire and fairly slow. However, to become also your intention, but on the third the bouncer knows off the day, adding fire thinking and mental geometry unless you are prepared to have the VDU explode down!

Unfortunately that's it — there are no more chances as you move through the game.

B.C.

instructions	90%
playability	40%
graphics	70%
value for money	50%



## cosmic defender B £6.50

Soft Joe's Business Centre, Clapham Rd, Bournemouth, Hurnside LA1 4LS

I suggest most people know who games are written in machine code rather than BASIC — BASIC is just too slow for good action. Well, this game is in BASIC!

It's a simple shoot/bomb the alien type, nothing new, unimpressive graphics and one of the worst keyboard control layouts I've seen in ages.

Because BASIC takes so

long to move things around on the screen, sometimes your ship seems to spin, movements are slow. I don't think of anything about this one to make me recommend that you buy it.

B.J.

instructions	90%
playability	20%
graphics	50%
value for money	10%



A disappointing game — I have other versions which are far superior (and which cost more!).

B.E.

instructions	90%
playability	60%
graphics	10%
value for money	20%







## IBM PROGRAMMING

can be an alternative way of filtering the screen. And most readers of FICR —NEXT keep producing an effective combination of an audience.

As a final matter for readers' reference, we would like to mention that the authors of this paper are not affiliated with any of the companies mentioned in the paper.

READY/DATA, article in *HCW*.  
FIG. 17. I have reproduced table 8. To obtain a demonstration of the CRUT OF DATA ERROR message, change the first number in line 170 to 8, and add a final line 180 PAUSE, 200.

[illegible]

```

100 DIM J=1 TO 10
110 PRINT "HOW MANY THINGS ON THE SCREEN?"
120 INPUT J
130 END

```

Table 9—An example of READ/SMART

```

0000 LET C=VAL IN TO THE POINT
0100 DIM Z(4*100)
0200 FOR I=0 TO 0
0300 LET Z(I)=0
0400 PRINT Z(I)
0500 NEXT I
0600 PRINT Z(0)
0700 END

```



**Abstract**

```

1  PRINT "*****"
2  LET N=10014
3  INPUT A0
4  IF A0=0 THEN GOTO 7
5  LET I=100-A0/10000-35+A0/10000*2.5
6  IF A0<0 THEN I=ABS(I)
7  LET S=A0/I
8  GOTO 1

```

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

```

2 LET N=10004
3 LET Y=PRN R
4 LET C=INT(Y/10)
5 LET Z=Y-10*C
6 GO20 L
7 PRINT N,C,CH+Z,CH+Y-PRN C+Z
8 IF INKEY#"" THEN GOTO 9
9 LET N=N+1
10 GOTO 3

```



## Are your finances dictating you road?

He said that working-out your character makes your mind better. "The mind must work."

[illegible]

NEW RELEASES	
<b>EPIC: GIVE US THIS</b>	<b>\$8.99</b>
An inspiring contribution to the Community, and national movement.	
<b>FLY BY: TONY &amp; TRANQUILLO</b>	<b>\$9.99</b>
Company Operations Key: Fly by There is Power in	
<b>UNCOMMON SENSE</b>	<b>\$9.99</b>
Insulating Company Companies and Copy	
<b>THE NEW YORK TIMES</b>	<b>\$9.99</b>
Private sector business in practice: The New York Times	
<b>THE NEW YORK TIMES</b>	<b>\$9.99</b>
Over 40 years of Company History: The New York Times	
Company: The New York Times	

Efficient Computer Services Ltd.  
(Incorporated in England and Wales)  
Registered Office: 10, Avenue Road,  
London, EC2A 4EJ, U.K.

© 2006 The Authors  
Journal compilation © 2006 Blackwell Publishing Ltd

# NOW

## IN YOUR HIGH STREET SHOPS

### FOOTBALL MANAGER

by  **Addictive Games**

for **SPECTRUM 48K AND ZX81 10K**

 **3D ACTION FOOTBALL**

by  **SPECTRUM**

for **SPECTRUM 48K AND ZX81 10K**

**Available from the offices of**  
**W.H. SMITH & SONS**

Manage your own team in this exciting game of skill which vividly captures the drama and excitement of real football

**• A COMMITMENT • F.A.C.F. • FARMER • FARMWORKERS •  
• TRANSFER PROJECT • TEAM • BELIEVERS •  
• NEW DAWN FACILITY • • IN THE MIDDLE OF THE WORLD**

[illegible]

- [illegible]

1000

1. The first step is to identify the problem. This involves understanding the symptoms and the context in which they are occurring.

**Figure 3**  
The figure shows a line graph with the y-axis labeled 'Percentage of correct responses' and the x-axis labeled 'Number of trials'. The graph displays a series of data points connected by a line, showing a general upward trend from approximately 60% to 85% over 10 trials. Error bars are present for each data point.







# Ughh! Don't let the slugs get their revenge

Your terraced garden is infested with 20 giant slugs, all seeking the oxygen from the air.

To reach your seed-box and plant the seeds you must clear the slugs from each level by dropping slug pellets, using the space bar.

To reverse direction use the left arrow. Remember that third level will reduce your oxygen reserve. Do not run out of pellets or descend a ladder before the slugs are killed or they will get their revenge.

## Main variables

- A: row of map on screen
- C: column of map on screen
- CO: enemy column of map
- DO: enemy row of map
- D: slug direction of map
- HP: number of slug pellets
- LO: number of slugs
- L: oxygen level

## How it works

- 100-109 define characters and letters
- 110-119 input and check number of slug pellets
- 120-179 on start screen graphics
- 180-199 on initial variables and map position
- 200-1299 on main moving, detect line process and hit on slugs, slugs and ladders
- 1300-1799 low and mid routines, screen scrolling game
- 1700-1819 information to player

```

700 REM SET SCREEN
710 CALL CLEAR
720 CALL SCREEN 2
730 CALL COLOR 1,1,1,1
740 REM HIDEPOINT
750 FOR I=1 TO 24 STEP 5
760 CALL HMOVE 1,1,144,240
770 NEXT I
780 CALL HMOVE 1,3,96,240
790 CALL HMOVE 1,36,96,240
800 CALL HMOVE 23,36,144,240
810 CALL HMOVE 1,4,144,270
820 FOR I=0 TO 23 STEP 5
830 FOR J=0 TO 5
840 GO=INT(RND*10)+4
850 CALL GMOVE 1,30,90
860 IF GO=0 THEN 920
870 CALL HMOVE 1,30,144
880 NEXT J
890 NEXT I
900 REM
910 FOR I=0 TO 5
920 CALL GMOVE 1,30,90
930 NEXT I
940 REM
950 REM
960 REM
970 REM
980 REM
990 REM

```

Your garden turns into a battleground as you try to defeat 20 giant slugs in Barbara Baldwin's program for the TI-99/4A.

**Will you risk typing it in?**

100 REM SLUGS AND LADDERS

110 REM

120 REM BY B. BALDWIN

130 REM DEF CHARACTERS

140 CALL CLEAR

150 CALL DRAW 104, "#####X#####"

160 CALL DRAW 105, "#####X#####"

170 CALL DRAW 106, "#####X#####"

180 CALL DRAW 107, "#####X#####"

190 CALL DRAW 108, "#####X#####"

200 CALL DRAW 109, "#####X#####"

210 CALL DRAW 110, "#####X#####"

220 CALL DRAW 111, "#####X#####"

230 CALL DRAW 112, "#####X#####"

240 CALL DRAW 113, "#####X#####"

250 CALL DRAW 114, "#####X#####"

260 CALL DRAW 115, "#####X#####"

270 CALL COLOR 14,10,317

280 CALL COLOR 16,14,317

290 CALL COLOR 18,18,317

300 CALL COLOR 20,22,317

310 CALL COLOR 22,26,317

320 CALL COLOR 24,30,317

330 CALL COLOR 26,34,317

340 CALL COLOR 28,38,317

350 PRINT "HOW MANY SLUG PELLETS?"

360 INPUT CO TO 999999

370 IF CO=0 THEN 400

380 IF CO=1 THEN 400

390 IF CO=2 THEN 400

400 REM

410 REM

420 REM

430 REM

440 REM

450 REM

460 REM

470 REM

480 REM

490 REM

500 REM

510 REM

520 REM

530 REM

540 REM

550 REM

560 REM

570 REM

580 REM

590 REM

600 REM

610 REM

620 REM

630 REM

640 REM

650 REM

Plots on a coordinate system. The program uses an array to store the coordinates of the slugs and the pellets.

**CALL DRAW** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

**CALL HMOVE** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

**CALL COLOR** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

**CALL HMOVE** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

**CALL KEY** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

**CALL CLEAR** (row, col, str) draws the character str at the coordinates (row, col). The row and col are the coordinates of the character.

```

660 REM
670 IF CO=0 THEN 1200
680 CO=0
690 CO=0
700 REM
710 REM
720 REM
730 REM
740 REM
750 REM
760 REM
770 REM
780 REM
790 REM
800 REM
810 REM
820 REM
830 REM
840 REM
850 REM
860 REM
870 REM
880 REM
890 REM
900 REM
910 REM
920 REM
930 REM
940 REM
950 REM
960 REM
970 REM
980 REM
990 REM

```

```

1180 GO=GO-1
1185 FOR I=0 TO 8 STEP -1
1190 CALL COLOR(180.-8.11)
1195 NEXT I
1198 CALL HOMEK(0.1,387)
1200 CALL COLOR(180.13.11)
1205 GO TO 738
1210 REM LOCAL ROUTINES
1215 CALL HOMEK(0.4,387)
1220 FOR I=10 TO 5 STEP -1
1225 CALL HOMEK(0.-0.1,180)
1230 CALL COLOR(180.-8.11)
1235 NEXT I
1240 GO TO 738
1245 REM THE SLUGS SLAUGHTERED STEP-1
1250 GOTO 585
1255 END
1260 FOR I=4 TO 30
1265 CALL COLOR(180.14.11)
1270 CALL HOMEK(0.1,387)
1275 CALL COLOR(180.-8.11)
1280 CALL COLOR(180.13.11)
1285 NEXT I
1290 GO TO STEP
1295 PRINT "YOU ARE OUT OF PELLETS"-1
1300 GOTO 1308
1305 REM MIN ROUTINE
1310 FOR I=0 TO 8 STEP -2
1315 CALL HOMEK(0.1,387)
1320 CALL COLOR(180.13.11)
1325 CALL HOMEK(0.5,387)
1330 NEXT I
1335 FOR I=25 TO 5 STEP -2
1340 CALL HOMEK(1.5,387)

```

```

14000 CALL SOLARIS(50,200,2)
14010 CALL SOLARIS(1,5,20)
14100 NEXT I
14200 CALL HOGAN(3,2,100)
14300 FOR I=0 TO 5 STEP 4
14400 CALL HOGAN(25,1,1000)
14500 CALL SOLARIS(20,2000,3)
14600 NEXT I
14700 FOR I=20 TO 5 STEP -4
14800 CALL HOGAN(25,1,1000)
14900 CALL SOLARIS(100,200,1,200,2)
15000 NEXT I
15100 CALL SOLARIS(100,200,1,200,1,200,2)
15200 FOR I=1 TO 2000
15300 NEXT I
15400 GOTO 1700
15500 PRINT TAB(15);"CALL SOLARIS";
15600 PRINT TAB(5);"HOGAN";
15700 PRINT TAB(5);"HOGAN";
15800 CALL NEXT I 5)
15900 IF I=0 THEN GOTO 1600
1600 IF I=0 THEN GOTO 1600
1610 CALL HOGAN(2,100)
1620 FOR I=1 TO 200
1630 NEXT I
1640 GOTO 1700
1650 FOR I=1 TO 200
1660 NEXT I
1670 FOR I=1 TO 200
1680 NEXT I
1690 FOR I=1 TO 200
1700 NEXT I
1710 FOR I=1 TO 200
1720 NEXT I
1730 FOR I=1 TO 200
1740 NEXT I
1750 FOR I=1 TO 200
1760 NEXT I
1770 FOR I=1 TO 200
1780 NEXT I
1790 FOR I=1 TO 200
1800 NEXT I
1810 FOR I=1 TO 200
1820 NEXT I
1830 FOR I=1 TO 200
1840 NEXT I
1850 FOR I=1 TO 200
1860 NEXT I
1870 FOR I=1 TO 200
1880 NEXT I
1890 FOR I=1 TO 200
1900 NEXT I
1910 FOR I=1 TO 200
1920 NEXT I
1930 FOR I=1 TO 200
1940 NEXT I
1950 FOR I=1 TO 200
1960 NEXT I
1970 FOR I=1 TO 200
1980 NEXT I
1990 FOR I=1 TO 200
2000 NEXT I
2010 FOR I=1 TO 200
2020 NEXT I
2030 FOR I=1 TO 200
2040 NEXT I
2050 FOR I=1 TO 200
2060 NEXT I
2070 FOR I=1 TO 200
2080 NEXT I
2090 FOR I=1 TO 200
2100 NEXT I
2110 FOR I=1 TO 200
2120 NEXT I
2130 FOR I=1 TO 200
2140 NEXT I
2150 FOR I=1 TO 200
2160 NEXT I
2170 FOR I=1 TO 200
2180 NEXT I
2190 FOR I=1 TO 200
2200 NEXT I
2210 FOR I=1 TO 200
2220 NEXT I
2230 FOR I=1 TO 200
2240 NEXT I
2250 FOR I=1 TO 200
2260 NEXT I
2270 FOR I=1 TO 200
2280 NEXT I
2290 FOR I=1 TO 200
2300 NEXT I
2310 FOR I=1 TO 200
2320 NEXT I
2330 FOR I=1 TO 200
2340 NEXT I
2350 FOR I=1 TO 200
2360 NEXT I
2370 FOR I=1 TO 200
2380 NEXT I
2390 FOR I=1 TO 200
2400 NEXT I
2410 FOR I=1 TO 200
2420 NEXT I
2430 FOR I=1 TO 200
2440 NEXT I
2450 FOR I=1 TO 200
2460 NEXT I
2470 FOR I=1 TO 200
2480 NEXT I
2490 FOR I=1 TO 200
2500 NEXT I
2510 FOR I=1 TO 200
2520 NEXT I
2530 FOR I=1 TO 200
2540 NEXT I
2550 FOR I=1 TO 200
2560 NEXT I
2570 FOR I=1 TO 200
2580 NEXT I
2590 FOR I=1 TO 200
2600 NEXT I
2610 FOR I=1 TO 200
2620 NEXT I
2630 FOR I=1 TO 200
2640 NEXT I
2650 FOR I=1 TO 200
2660 NEXT I
2670 FOR I=1 TO 200
2680 NEXT I
2690 FOR I=1 TO 200
2700 NEXT I
2710 FOR I=1 TO 200
2720 NEXT I
2730 FOR I=1 TO 200
2740 NEXT I
2750 FOR I=1 TO 200
2760 NEXT I
2770 FOR I=1 TO 200
2780 NEXT I
2790 FOR I=1 TO 200
2800 NEXT I
2810 FOR I=1 TO 200
2820 NEXT I
2830 FOR I=1 TO 200
2840 NEXT I
2850 FOR I=1 TO 200
2860 NEXT I
2870 FOR I=1 TO 200
2880 NEXT I
2890 FOR I=1 TO 200
2900 NEXT I
2910 FOR I=1 TO 200
2920 NEXT I
2930 FOR I=1 TO 200
2940 NEXT I
2950 FOR I=1 TO 200
2960 NEXT I
2970 FOR I=1 TO 200
2980 NEXT I
2990 FOR I=1 TO 200
3000 NEXT I
3010 FOR I=1 TO 200
3020 NEXT I
3030 FOR I=1 TO 200
3040 NEXT I
3050 FOR I=1 TO 200
3060 NEXT I
3070 FOR I=1 TO 200
3080 NEXT I
3090 FOR I=1 TO 200
3100 NEXT I
3110 FOR I=1 TO 200
3120 NEXT I
3130 FOR I=1 TO 200
3140 NEXT I
3150 FOR I=1 TO 200
3160 NEXT I
3170 FOR I=1 TO 200
3180 NEXT I
3190 FOR I=1 TO 200
3200 NEXT I
3210 FOR I=1 TO 200
3220 NEXT I
3230 FOR I=1 TO 200
3240 NEXT I
3250 FOR I=1 TO 200
3260 NEXT I
3270 FOR I=1 TO 200
3280 NEXT I
3290 FOR I=1 TO 200
3300 NEXT I
3310 FOR I=1 TO 200
3320 NEXT I
3330 FOR I=1 TO 200
3340 NEXT I
3350 FOR I=1 TO 200
3360 NEXT I
3370 FOR I=1 TO 200
3380 NEXT I
3390 FOR I=1 TO 200
3400 NEXT I
3410 FOR I=1 TO 200
3420 NEXT I
3430 FOR I=1 TO 200
3440 NEXT I
3450 FOR I=1 TO 200
3460 NEXT I
3470 FOR I=1 TO 200
3480 NEXT I
3490 FOR I=1 TO 200
3500 NEXT I
3510 FOR I=1 TO 200
3520 NEXT I
3530 FOR I=1 TO 200
3540 NEXT I
3550 FOR I=1 TO 200
3560 NEXT I
3570 FOR I=1 TO 200
3580 NEXT I
3590 FOR I=1 TO 200
3600 NEXT I
3610 FOR I=1 TO 200
3620 NEXT I
3630 FOR I=1 TO 200
3640 NEXT I
3650 FOR I=1 TO 200
3660 NEXT I
3670 FOR I=1 TO 200
3680 NEXT I
3690 FOR I=1 TO 200
3700 NEXT I
3710 FOR I=1 TO 200
3720 NEXT I
3730 FOR I=1 TO 200
3740 NEXT I
3750 FOR I=1 TO 200
3760 NEXT I
3770 FOR I=1 TO 200
3780 NEXT I
3790 FOR I=1 TO 200
3800 NEXT I
3810 FOR I=1 TO 200
3820 NEXT I
3830 FOR I=1 TO 200
3840 NEXT I
3850 FOR I=1 TO 200
3860 NEXT I
3870 FOR I=1 TO 200
3880 NEXT I
3890 FOR I=1 TO 200
3900 NEXT I
3910 FOR I=1 TO 200
3920 NEXT I
3930 FOR I=1 TO 200
3940 NEXT I
3950 FOR I=1 TO 200
3960 NEXT I
3970 FOR I=1 TO 200
3980 NEXT I
3990 FOR I=1 TO 200
4000 NEXT I
4010 FOR I=1 TO 200
4020 NEXT I
4030 FOR I=1 TO 200
4040 NEXT I
4050 FOR I=1 TO 200
4060 NEXT I
4070 FOR I=1 TO 200
4080 NEXT I
4090 FOR I=1 TO 200
4100 NEXT I
4110 FOR I=1 TO 200
4120 NEXT I
4130 FOR I=1 TO 200
4140 NEXT I
4150 FOR I=1 TO 200
4160 NEXT I
4170 FOR I=1 TO 200
4180 NEXT I
4190 FOR I=1 TO 200
4200 NEXT I
4210 FOR I=1 TO 200
4220 NEXT I
4230 FOR I=1 TO 200
4240 NEXT I
4250 FOR I=1 TO 200
4260 NEXT I
4270 FOR I=1 TO 200
4280 NEXT I
4290 FOR I=1 TO 200
4300 NEXT I
4310 FOR I=1 TO 200
4320 NEXT I
4330 FOR I=1 TO 200
4340 NEXT I
4350 FOR I=1 TO 200
4360 NEXT I
4370 FOR I=1 TO 200
4380 NEXT I
4390 FOR I=1 TO 200
4400 NEXT I
4410 FOR I=1 TO 200
4420 NEXT I
4430 FOR I=1 TO 200
4440 NEXT I
4450 FOR I=1 TO 200
4460 NEXT I
4470 FOR I=1 TO 200
4480 NEXT I
4490 FOR I=1 TO 200
4500 NEXT I
4510 FOR I=1 TO 200
4520 NEXT I
4530 FOR I=1 TO 200
4540 NEXT I
4550 FOR I=1 TO 200
4560 NEXT I
4570 FOR I=1 TO 200
4580 NEXT I
4590 FOR I=1 TO 200
4600 NEXT I
4610 FOR I=1 TO 200
4620 NEXT I
4630 FOR I=1 TO 200
4640 NEXT I
4650 FOR I=1 TO 200
4660 NEXT I
4670 FOR I=1 TO 200
4680 NEXT I
4690 FOR I=1 TO 200
4700 NEXT I
4710 FOR I=1 TO 200
4720 NEXT I
4730 FOR I=1 TO 200
4740 NEXT I
4750 FOR I=1 TO 200
4760 NEXT I
4770 FOR I=1 TO 200
4780 NEXT I
4790 FOR I=1 TO 200
4800 NEXT I
4810 FOR I=1 TO 200
4820 NEXT I
4830 FOR I=1 TO 200
4840 NEXT I
4850 FOR I=1 TO 200
4860 NEXT I
4870 FOR I=1 TO 200
4880 NEXT I
4890 FOR I=1 TO 200
4900 NEXT I
4910 FOR I=1 TO 200
4920 NEXT I
4930 FOR I=1 TO 200
4940 NEXT I
4950 FOR I=1 TO 200
4960 NEXT I
4970 FOR I=1 TO 200
4980 NEXT I
4990 FOR I=1 TO 200
5000 NEXT I
5010 FOR I=1 TO 200
5020 NEXT I
5030 FOR I=1 TO 200
5040 NEXT I
5050 FOR I=1 TO 200
5060 NEXT I
5070 FOR I=1 TO 200
5080 NEXT I
5090 FOR I=1 TO 200
5100 NEXT I
5110 FOR I=1 TO 200
5120 NEXT I
5130 FOR I=1 TO 200
5140 NEXT
```

**dps** LTD.  
TELEPHONE: CAMBERLEY 02523  
33, LONDON ROAD, CAMBERLEY, SURREY

**10 BLANK DATA CASSETTES**  
COMPUTER GRADE TAPE  
SUITABLE FOR HOME COMPUTERS  
3 WHITE LABELS PLUS 1 INLAY CARD

CUT ALONG THIS LINE

1 PACK OF 10 DATA TAPES WITH LIBRARY BOXES

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

PRICE \$175 I ENCLOSE CHEQUE P/O  
INC VAT FOR \_\_\_\_\_

POST & PACKAGING FREE

AN ELECTRICITY SUPPLY BOARD HAS BEEN FORMED

# GALAXY

## Number One For Texas

[illegible]

doi:10.1017/S0022292412001619

**PLEASE MAIL TO: 3500 N. HIGHWAY 100, SUITE 100  
DENVER, CO 80202**

## LANTERN

### 4. ABOUT THE SOFTWARE

<b>DANGER! HOT KISS</b> Movie	Don't Date Me! Features the beautiful teenage beauty queen, who is very sexy, making the audience go crazy. <b>\$2.99</b>
<b>TECHN. 1476</b> Movie	An adventure using a full 16-page book script. English subtitles. <b>\$2.99</b>
<b>IN AFRICA (REV)</b> DVD Movie	One of the latest movies available at the store, in color. <b>\$2.99</b>

[illegible]

**Responsible:** There are no agency charges at all and all plans include fuel and postage. Send \$1.00 today! Send \$5.00 with order of purchase of one. Member and 10% discount.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

100

Workday: 08:12:48.334, 0.7836



**SHARDS SOFTWARE**  
189 Eden Road, Ilford, Essex IG1 2UG  
Phone 01-514-4671

**THE MOST COMPREHENSIVE RANGE OF  
QUALITY DRAGON SOFTWARE** covering games  
and education, for all ages, realistically priced  
(prices range from £3.95 to £6.95).

Contact us now for details of our products or for your  
nearest stockist.

**DEALERS:** Contact us now to hear about our unbeatable  
dealer discounts. Phone 01-514-4671 (ask for Steve Males)

## TI-99/4A SOFTWARE

Two game new games for the unexpanded TI-99/4A

**PILOT** £5.95

Flight simulation game for one player. Graphics display of the  
sky, map and terrain map, plus updated information panel.  
Controls for take-off, landing or in-flight. Full instructions in-  
cluded.

**TITREK** £5.95

Defeat the Klingon invasion fleet. Features include 3 star  
levels, graphics: quadrant display, galaxy map, phasers,  
photon torpedoes, long range scans, damage report, shield  
control, impulse and warp drive. Full 8x8 galaxy. Full in-  
structions included.

Send cheque or PO or telephone with Access/Visa

**APEX SOFTWARE**

1004

101, Leverett Drive South, Brighton BN1 4BB  
Tel: Brighton 01753 54561



# STARTECH



## VIC 20 16K RAM PACK

# £28.95

Including VAT and Postage and Packing.

Tick for further information

- ☐ VIC 20 PRODUCTS  
☐ COMMODORE 64

All prices quoted in  
pounds sterling unless stated otherwise

PLEASE SEND ME

**VIC 20 16K RAM PACK**

Qty

Price

**£28.95**

TOTAL

Name

Address

I enclose Cheque, P.O. for

CREDIT CARD ☐ ACCESS ☐ BARCLAY CARD ☐

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

**STARTECH** 208 Aigburth Rd, Aigburth, Liverpool L17 0SL 717-7167

## Defend your planet from the alien hordes

## Next T

## NEW SPECTRUM BRIDGE PLAYS

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## BRIDGE PLAYS THE BEST AT £7.95

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## ORIGINAL SPECTRUM

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## 24 BRIDGE PLAYS

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## 104 SPECTRUM BRIDGE PLAYS

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## SPECTRUM BRIDGE TUTOR

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## COLORFUL CAVES

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## SPECTRUM BRIDGE PLAYS

## SPECTRUM BRIDGE PLAYS

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## FLOATING POINT FORM

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## ORIGINAL SPECTRUM FORUM

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## SPECTRUM BRIDGE PLAYS

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## Speech from the Spectrum

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

## DEEPER AMPLIFIER

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

These new Spectrum Bridge plays are available in a special offer of 10 for £10.00. The plays are available in a special offer of 10 for £10.00.

**AT LAST!!  
SINCLAIR  
SPECTRUM  
JOYSTICK  
CONTROLLER  
£14.95!!**

**ELECTRONIC  
COMPONENTS FOR  
THE HOME  
MARKET. ALWAYS  
IN STOCK  
INCLUDING BBC  
DISC UPGRADES  
FOR £55 PLUS VAT**

ALL PRICES INCLUDE V.A.T. & P.A.P.  
LARGE RANGE OF  
COMPONENTS, HARDWARE  
AND SOFTWARE.

**SPECTRUM  
SOUND  
AMPLIFIER  
WITH SPEAKER  
MAINS POWERED  
WITH SAVE/LOAD  
SWITCHING  
ONLY £9.95**

**SPECTRUM  
MEMORY  
UPGRADES  
AN EXTRA 32K FOR  
ONLY  
£24.95 FOR TYPE 2  
MACHINES**

**I<sup>2</sup>L**  
INTERACTIVE  
INSTRUMENTS LTD  
INTERACTIVE HOUSE  
GREAT CENTRAL ST  
LITCHFIELD  
LEIC. 322 667

**DISK DRIVES  
THE LATEST  
SHUGART SA200  
40 TRACK DRIVES  
COMPLETE WITH  
POWER SUPPLY  
AND STEEL CASE  
FOR ONLY  
£199  
FOR BBC**





## Superb Printer at a Low Price

Shitawa CT1 CP80 for only £289 (+£3 pp)

**FREE**

2000 sheets of perforated tractor feed paper

Compatible with:  
BBC, Series, Dragon  
Torch, Apple, VIC,  
Deborne, infact almost  
all other types.



Centronics Interface - optional RS232C  
Interface available.

80 column/80cps  
Friction & Adjustable Tractor Feed  
Bi-Directional Logic seeking  
Hi-Res Graphics  
Vertical & Horizontal Tab  
ular Style.

Hurry... Don't Delay send your cheque  
now and get your box of 2000 sheets of  
paper free.

**R.I.M.U. (UK) Ltd**

4 MILL ROAD  
CAMBRIDGE CB1 2AG  
0223 430000  
TELEPHONE 0223 210221

## CASSETTE DUPLICATION SERVICE

No order too large or too small. Fast  
efficient service using only the latest  
studio equipment

need cassette copies in a hurry?  
We can provide a super-fast service at  
a slight extra cost try us! We aim to  
please.

Delivery at cost

Blank C12 Cassette Tapes 34p plus  
VAT, also Cassette Labels at £2.75 +  
VAT per 100.

JLC

49 Castle St.,  
Barnsley, South Yorkshire, S70 1NT  
Phone: 0226 87707

As we try to maintain a fast service we  
cannot accommodate visitors and telephone  
enquiries preferred after 6pm.

# DON'T JUST TAKE OUR WORD FOR IT!

SUMLOCK MICROWARE  
SUPERB SOFTWARE FOR THE VIC 20



10-14  
£7.95



10-15  
£7.95



10-16  
£7.95



10-17  
£7.95



10-18  
£7.95



10-19  
£7.95



10-20  
£6.95



10-21  
£6.95



10-22  
£7.95



10-23  
£6.95



10-24  
£6.95



10-25  
£6.95



10-26  
£6.95



10-27  
£6.95



10-28  
£6.95



10-29  
£6.95

SEND FOR YOUR SUMLOCK  
MICROWARE NOW!

FOR A FREE  
PROCEDURE AND YOUR NEAREST  
DEALER INFORMATION

**SUMLOCK**  
MICROWARE

126 Dinning rd, Manchester, M3 2NE, Dept. HC51





## Top Ten programs for the VIC 20

- |    |                 |                 |
|----|-----------------|-----------------|
| 1  | Catcha Sneetcha | Imagines (2)    |
| 2  | Wacky Warms     | Imagines (1)    |
| 3  | Arader          | Bus Byts (3)    |
| 4  | Cometalk        | Bus Byts (7)    |
| 5  | Asteroid        | Bus Byts (3)    |
| 6  | Planet          | Cometalkers (2) |
| 7  | Planet          | Asteroiders (3) |
| 8  | Arader          | Asteroiders (1) |
| 9  | Arader          | Bus Byts (1)    |
| 10 | Chess           |                 |

Compiled by Scott. Figures in brackets are last week's position

## Top Ten programs for the ZX81

- |    |                  |              |
|----|------------------|--------------|
| 1  | Scratch          | Quadrals (3) |
| 2  | Football Manager | Arader (1)   |
| 3  | Defender         | Quadrals (2) |
| 4  | Flight Simulator | Scratch (2)  |
| 5  | 1K Chess         | Scratch (1)  |
| 6  | 1K Games         | Scratch (3)  |
| 7  | Planetary Games  | Quadrals (1) |
| 8  | Invaders         | Scratch (1)  |
| 9  | Spacewar Island  | Bus Byts (1) |
| 10 | Invaders         |              |

Compiled by Scott. Figures in brackets are last week's position

## Top Ten programs for the Spectrum

- |    |                        |                      |
|----|------------------------|----------------------|
| 1  | Jet Pac                | Ultimate (1)         |
| 2  | Transcendence Tower    | Richard Shepherd (3) |
| 3  | Flight Simulator       | Planet (2)           |
| 4  | Happen Once Strong     | Planet/M. House (4)  |
| 5  | Happen and the Saviors | Planet/M. House (3)  |
| 6  | Moonbase at Hell       | Sattek (7)           |
| 7  | Postmaster             | Melbourne House (10) |
| 8  | Pace                   | Ultimate (1)         |
| 9  | 3D Turf                | Planet (1)           |
| 10 | Mad Martin             | Melbourne (1)        |

Compiled by R. H. Smith. Figures in brackets are last week's position

## Top Ten programs for the Dragon 32

- |    |                      |               |
|----|----------------------|---------------|
| 1  | Mountains            | Dragon (1)    |
| 2  | Basic Tutor          | AmigaSoft (1) |
| 3  | Personal Finance     | Dragon (1)    |
| 4  | Special Collection 1 | Dragon (1)    |
| 5  | The King             | MicroSoft (1) |
| 6  | Archer's Attack      | MicroSoft (2) |
| 7  | Planet Invaders      | MicroSoft (3) |
| 8  | Space War            | MicroSoft (4) |
| 9  | Highlight            | MicroSoft (5) |
| 10 | Dragon Talk          | MicroSoft (6) |

Compiled by Scott. Figures in brackets are last week's position

## U.S. SCENE

# A human face for micros

The week I received a complimentary copy of a magazine called Micro Decision, in the post. After having an fill of so-called news and "how-to" computer magazines, I have to say that this one appears to live up to its promise.

All too often, magazines try to be all things to all people, and end up being nothing to anyone. In an issue for sale in the store near where I personally am working, I found that all you get from articles is that they are either too machine-dependent or too machine-dependent (enough). Admittedly, they might be too general or too specific. Not so with Micro Decision. The magazine is for people who work with computers rather than doing hardware-oriented, cut-throat, or anything else serious. I find this approach most useful and rewarding.

The magazine really staffs the non-technical magazine of personal computing, which is a very appropriate title. As the publisher is quick to note in the introduction, the magazine is devoted to the human side of micro. There are examples of human personality, stories, and articles full of information throughout the pages of the first issue. One feature alone is enough to make me a devoted reader — each issue includes a picture of special interest (a picture human touch). How many have heard of a smiling or grumpy computer screen only to be ignored as just a mere picture, or worse, as a joke? I am sure it is not to happen to me all the time before I become a foreign correspondent in this human world.

Among the interesting articles in the first issue are three. First, by Ray Bradbury (you know what of some), an interview of Gene Hopper (often called the master of computers, or perhaps the computer master) and an essay on the need for microcomputers in plain English format. Admittedly, there are columns on new hardware and software, and a regular column called The Computer Corner (now sharing with the many benefits that children can obtain from micro). Let me already recommend the magazine to all who computer using human beings and their. Write to Micro Decision, 2017 Laurel Avenue, Suite 202 Los Angeles, CA 90030. One year subscription is \$15.00 or \$24.00 for foreign living has provided.

★ ★ ★ ★

I had a Mac Commodore has helped its target users to make the most of their microcomputing experience. In the first quarter of the year, the firm has increased sales up 100% from the same time last year. The increased success is attributed to increased demand for the Commodore 64, 128, and 128C computers.

Not exactly leaving sales was the decision to market these computers through the use of America's largest retail chain stores, National Zaire. Another large American retailer, J.C. Penney, is reported to be close to finalizing a deal with Commodore too. Microcomputers in the first year probably very happy sales that received 100% higher earnings for the first quarter of the year when compared to the same time period last year.

★ ★ ★ ★

The Commodore 64 is a computer program. Making the Commodore 64 computer program is a challenge in itself. In the first quarter of the year, the firm has increased sales up 100% from the same time last year. The increased success is attributed to increased demand for the Commodore 64, 128, and 128C computers.

The programs are heavily priced, but in order to win, a user must create and to share their skills. The Commodore 64 is a computer program. Making the Commodore 64 computer program is a challenge in itself. In the first quarter of the year, the firm has increased sales up 100% from the same time last year. The increased success is attributed to increased demand for the Commodore 64, 128, and 128C computers.

2001 is a for this year.

Paul Jones

Portland, California

### Alien Taxi TRS-80 Models I & III £12 (cass.) £14 (disc)

Murdoch, 41 Thorne Road, St  
August, Carmarthen PL26 1AB

Alien Taxi is a simple game to play, but, I found, one of the most difficult to master. Using the arrow keys, or a joystick if you have one, you land a small space ship off a beach and land it in a body of water on other space ship pads to collect passengers.

The amount of money you get on your trip is shown on a speed indicator in relation to the physical speed of your ship.

The score is also a good help

as it relates the speed of your ship to change to meet with the increase of speed.

This is not a game that you will master easily, but if you learn it to go into the documentation means you will quickly get the idea of how it should be played.

The joystick version becomes easy. Though due to no lock of ship, I have not tried it out yet. I got the impression that, to master it, someone has to make challenges creating the ideal character.

8.5

video games  
playability  
graphics  
value for money

80%  
70%  
80%  
80%



### Frantic VIC-20 £5.50

Imperial Motion Software, P.O.  
Box 9900, Lake Viewport,  
Maryland

One of the latestest additions to the microcomputer market is the full

to many titles is possible. The game is no exception.

This title is a space ship design ship through a planet. Finally when upper and lower of the box, it becomes impossible. As the ship moves, some are given a way to get impressions of a first coming in land.

To help you locate the space, you have a laser (space) to

### Planet Conquest Dragon-32 plus 1 joystick £5.95

Matrix Computer Games,  
Carmarthen House, Llanwrda,  
Carmarthen, Llanwrda, Wales

Planet Conquest game has never existed in any other way. It is a game of strategy, with a joystick for control to manoeuvre the first 128 levels and a program through the game.

On the first, you land your spaceship a number of steps on one of the first 128 levels. The number of levels remaining with the last level.

Second things the friends of a rocket and a planet. When you finally go to the last level to see what your ship is

also be first to move the ground in a command.

Planet Conquest is a game, though, as the first mission will show, is the design of a level to move from a space game of the first 128 levels to a new world in the game.

If the joystick, some of the levels, and a joystick, though, the first mission will show, is the design of a level to move from a space game of the first 128 levels to a new world in the game.

The joystick, some of the levels, and a joystick, though, the first mission will show, is the design of a level to move from a space game of the first 128 levels to a new world in the game.

video games  
playability  
graphics  
value for money

80%  
80%  
80%  
80%



# Intergalactic games for earthlings

Visit strange planets, meet  
weird alien civilisations... and  
shoot them.

found these games difficult to  
master and not really worth  
the price.

Overall the graphics are above  
average but the others appeared to  
be more, more, more, more.

For some reason I cannot find  
this game to be really easy to  
master. The first 100 levels are  
for the player to master. It is  
really a game of strategy, which  
is, in reality, the game of the  
first 100 levels. It is a game of  
strategy, which is, in reality, the  
game of the first 100 levels.

one, one, one  
The first 100 levels are for the  
player to master. It is a game of  
strategy, which is, in reality, the  
game of the first 100 levels.

8.5

video games  
playability  
graphics  
value for money

80%  
80%  
70%  
80%



### Galactic Commander DOC B £6.95

Microgame W, LUNA, Rigel  
Space, Chicago, Illinois, USA  
L2 400

This is a version of the last  
game, but it is a game of strategy.  
The first 100 levels are for the  
player to master. It is a game of  
strategy, which is, in reality, the  
game of the first 100 levels.

I found this to be a game of  
strategy, which is, in reality, the  
game of the first 100 levels.

The instructions are good but  
not a game of strategy. The first  
100 levels are for the player to  
master. It is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

Microgame W, LUNA, Rigel  
Space, Chicago, Illinois, USA  
L2 400

video games  
playability  
graphics  
value for money

80%  
80%  
70%  
80%



### Xenon Raid Atari 400/800 32K £14.95

Imperial Motion Software, P.O.  
Box 9900, Lake Viewport,  
Maryland

The game is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

The game is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

The game is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

The game is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

The game is a game of strategy,  
which is, in reality, the game of  
the first 100 levels.

video games  
playability  
graphics  
value for money

80%  
80%  
70%  
80%





A VIDCOM CREATION

# MIJID, BECAUSE YOUR PRODUCTS HAVE GROWN UP...

Video games: a 75% growth in 1985. A spectacular increase, going food for thought! Home micro-computers and video-games are nearing full maturity. Having reached the stage of development, they can only strengthen their upward trend, the help of a vigorous commercial strategy. And thus Vidcoms are the seed and created Mijid.

## COINCIDING WITH VIDCOM, MIJID IS EXCLUSIVELY RESERVED FOR MICRO-COMPUTERS AND VIDEO GAMES

If you are a publisher, programmer or analyst, micro-technician or distributor, the success of your products will be enhanced by attending Mijid.

## FIVE DAYS IN WHICH TO MEET PROFESSIONALS FROM AROUND THE WORLD

retailers and distributors meeting and developing their sales network; producers from all domains of the software industry looking for new programming ideas; writers and programmers negotiating rights for promotion, adaptation and distribution; international journalists there to report on your new products.

## MIJID IS A VIDCOM CREATION

and there is a strong tie between these two shows. It's normal: their interests are complementary. Furthermore, the professional attending Mijid will be able to count themselves among the regular, prestigious Vidcom attendance. A solid guarantee for contacts and contacts.

Get ready for the next surge of growth, attend Mijid.



# Mijid

## MIJID AND VIDCOM, A COMMON PASSPORT TO NEW COMMUNICATIONS

The first International Video Games, Personal and Home Computer Market  
Palais Crocette Cannes (France), 3-7 October, 1985

Trade only

Invited exhibitors and engaged exhibitors: **Exposure**. Please visit the entry way (Mijid) entrance to "Exposure".  
Show's area: **Exposition**.

Invited Company:  
Avenue de la Croix-Rouge 92000 Nanterre  
Access: **Entrée**

Access to company: **Entrée**

Commercial Director: J. J. Arnaud-Vincent-Petit, 238 rue de la République - 75001 Paris (France) - Tel. 01 47 88 40 00 - Telex 490 041 MIJID  
US representative: Science Industry - Foreign Sales and Promotion Office (SIPSO) Science Data Systems 677 070 - Tel. 060 38 15 84 - Telex 490 041  
UK representative: Jack B. Smith - International Exhibitions Organisation Ltd 11 Southcombe Lane Weybridge (UK) - Tel. 018 496 53 57 - Telex 71660





# Bamby SOFTWARE



## DRAGON TI-99/4A for SPECTRUM 48

### CHALLENGE (EXPERIENCE)

A personal challenge system we can modify to suit your main requirements. Prices are for quote. Approx £15.00

### QUESTS (EXPERIENCE)

Begin the magic ring, but to do so you must first find the key to the Tower, meet soldiers, and more. Then, launch the Dragon and you're home and dry... almost. No new graphics used. £3.00

### WARRIOR (3) (EXPERIENCE)

Set in the City of the future, this game contains the best elements of both arcade and adventure games. Choose the end of the world before they decide you and your City. Three levels of difficulty to suit all tastes and tastes. £3.00

### WOPWOP (3) (EXPERIENCE)

A splendidous fun game! Beat the ghosts, Gloppe and the yolkies. Features: amongst other delicious features, Gloppe parades at the same time! Lots of new graphics and text. £3.00

### AMAZING (EXPERIENCE)

Based on the most popular game for the under 16's, it's ranging from quite simple to truly complex. As a training way to analyse your software skills, and they learn from it too. It's not perfect. £3.00

### ALONE AT SEA, FOR THE TITANIC (3) (EXPERIENCE)

Try and rescue the sinking ship, but don't forget your supplies which are hidden somewhere. Text. £3.00

### 4-4-4 (3) (EXPERIENCE)

A word builder. Cover the squares once only using the bright letters and moves. (Use 11 for graphics). £3.00

### MYSTERY MANOR FOR THE SPECTRUM (EXPERIENCE)

Find the monster before he let shed. Includes you and your career as Detective Robert L. Gresham and text. £3.00

### MASTER CODE FOR THE SPECTRUM (EXPERIENCE)

Based on the famous game. Try your skill against the main puzzle. You CAN beat it. Graphics and text. £3.00

### GOLDEN APPLES OF THE SUN

The Golden Apples have been stolen and hidden in seven of seven locations. Can you recover them all? There is a treasure chest you have. Huge graphics and text. £3.00

### STOCKMARKET

Test your skill on the stockmarket. Prices are influenced by your own actions, and Government actions - just like the real thing! Test if you can make a million. Text. £3.00

### ALAN COOPER'S

A four part adventure game. This tape contains the first two parts, in which you must escape from the Castle, then journey across the Great Green Plains to the Mountains of the Moon. No new graphics and text. £3.00

### MINI-GAMES

Five short games, an tape containing of Starship, Maths Test (3 levels of difficulty), Guess the Number, and Guess a game in which you try to guess a year at the farming business. Text. £3.00

### INTER-PLANETARY TRADER

You are the Captain of a Starship. You have to buy a cargo and transport the star matter pump to your destination. But beware, monsters and space pirates are out to get you. Text. £3.00

All available immediately from Bamby Software, Levenshaye, (off of Home Park) STB. Includes our 90 day quality guarantee. Access orders welcome by mail or telephone. 0830462 312. Dealer Enquiries Welcome and 48 hour delivery.

# Mr. Chip SOFTWARE

## VIC II GAMES AND UTILITIES

BRUCE Dwyer, Dely

This is a library with a difference as you can do the screen whilst collecting people from which you can help and guide. They transport from where you like. (DO NOT OVERLOAD) - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

### CRUISE

This is a free alternate from previous for the VIC with single, both and more. (DO NOT OVERLOAD) - READY - is a beautifully written simulation game. (DO NOT OVERLOAD) - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

### MINI-GAMES - PENGUIN - BY LIPS

These great games of choice for you and your. (DO NOT OVERLOAD) - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

### DEBARCO - mini game over files and records on tape

£3.00

### SPACE INVADERS - mini game over files and records on tape

£3.00

### ALAN COOPER'S - mini game over files and records on tape

£3.00

### ALAN COOPER'S - mini game over files and records on tape

£3.00

## COMMODORE 64 GAMES AND UTILITIES

BRUCE Dwyer, Dely

POWERON - FOR LIFE - BY LIPS - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

MINI-GAMES - PENGUIN - BY LIPS - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

DEBARCO - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

SPACE INVADERS - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

ALAN COOPER'S - mini game over files and records on tape - READY - will certainly replace the others for your library with this in its sudden death. An original computer and challenging game. £3.00

DEALER ENQUIRIES WELCOME

D.T.  
Fated...

Hi, I thank you authors D.T. for a very fine review of the program D.T. 84, in MCM 75, in view of the fact contained in the program's introduction. There are now being marketed for a limited time in point on subscription period in which you have already bought the program.

A POINT program does not have to provide every POINT — you may well do where C.T.S. The other applies to C.T.S.

In the way, the program does not need to contain all the data in your database to place in it, but requires in place with themselves on the screen independently. This was the only program we bought at £1.49 (MCM 75) as well as MCM 75. There is a review in the MCM 75 (MCM 75) down in there for

Ross Farnham, West.

...And  
glated

We thank you for the review of our software The Visual Programmer, but we feel that your reviewer D.T. has not only misunderstood the purpose for which this program was written.

It was not built to teach machine code but to provide a stepping stone for an understanding of major program operations, while a cost of the Visual Programmer is only £1.00 to learn with all the tools in learning machine code.

It was developed as a result of experiencing and ready understood operations for a teaching program as well as a tool used to learn by the author.

We feel this misunderstanding that your reviewer has indicated, because the program is designed to be used by the reviewer and was not designed to be a computer program. The Visual Programmer is a teaching program as well as a tool used to learn by the author. It was developed as a result of experiencing and ready understood operations for a teaching program as well as a tool used to learn by the author.

We feel this misunderstanding that your reviewer has indicated, because the program is designed to be used by the reviewer and was not designed to be a computer program. The Visual Programmer is a teaching program as well as a tool used to learn by the author.

Concerning the fact that 'and' is omitted in part of a program, in correct machine code format 'AND' has been substituted into through a new class to represent an error in the program. I am sorry to hear your opinion. Y. J. Collins, Glenside, North Yorkshire

Send your letter to Letters, Home Computing Weekly, 145 Charing Cross Road, London WC2H 0EE. Don't forget to name your computer — the best letter could win £5-worth of software. Queries cannot be answered on this page

Club corner  
— in Leeds...

The Leeds BBC Disc Group meets the first and third Tuesday of every week in January, at 7.30 at the Leeds City Centre, Leeds. Dave Kettle, Leeds.

...in  
Manchester.

Manchester Area computer enthusiasts meet at 7.30 every other Thursday evening at the Victoria Hotel, Victoria Road, Salford, Manchester. For further information, ring Mr. Thomas at Bolton 200770 or Jack Young on 061 758 8204. Mr. Morris, Salford, Lancs.

...for BBC  
disc  
users...

A group of BBC disc users are getting together to produce a directory for the members of the Forum 86-88 Disc Club.

The idea is to exchange programs of all kinds, to swap software, information and to share ideas. This will be done by a directory for the members ready to BCC up with each other.

Would you interested BBC disc users please send a stamped addressed envelope with their disc details for more information to request at the address below.

Peter Hughes, Forum 86-88 Disc Club, c/o The Learning Library, The Market Street, Bolton BL6 4AA.

...for ZX  
micros...

The International Student User Group has just been formed with the aim of the City of London and the City of London.

The group will meet only for the first time and will provide a monthly newsletter.

Mr. J. J. Jones, and a quarter of the group will be formed in a separate room.

The group will supply Student related products to members at a discount price, and further progress will be made in the future. The group will be formed in a separate room.

S. Walker and P. Jones (The International Student User Group).

Don't let the  
micro fans  
suffer

I have been interested in micro fans for about a year now, though I did not get my own until last year. I have been interested in micro fans for about a year now, though I did not get my own until last year.

Since your issue of MCM 75 I have read all of the reader's comments and noticed the following two points from it. First, I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

Finally, I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

Secondly, I think that the importance of the fan is not just in the fan, but in the fan, and there is a fan, and there is a fan, and there is a fan.

I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

Finally, I think that the importance of the fan is not just in the fan, but in the fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

Finally, I think that the importance of the fan is not just in the fan, but in the fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.

Finally, I think that the importance of the fan is not just in the fan, but in the fan, and there is a fan, and there is a fan, and there is a fan. I have noticed that a fan is a fan, and there is a fan, and there is a fan, and there is a fan.





# CLASSIFIED ADVERTISEMENT — ORDER FORM

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15

## PREFERRED CLASSIFICATION

Please place an advert in Home Computing Weekly for  
Please indicate number of insertions required.

words

Advertisers send only the first 250 words. The  
Trade per word increases charge 1<sup>st</sup> words.  
Simply print your message in the coupon and  
send with your cheque or postal order made  
payable to Angus Specialist Publications Ltd on

CLASSIFIED DEPT. HOME COMPUTING WEEKLY  
145 Charing Cross Rd., London WC2H 9EE  
Tel. 01 407 1002

Name

Address

To be filled in



1 407 1002

## EDITORIAL ASSISTANT

# Computing today

Due to promotion, Computing Today is seeking an Editorial Assistant. The person we are looking for is an accurate writer with a sense of humour who will be able to maintain the high standards of the magazine while keeping to deadline. Knowledge of program assessment, development and debugging is required, both in BASIC and machine code/assembly language (preferably for the 286 and/or 68000). Applicants should be able to express themselves in English but no journalistic experience is necessary. Training in technical journalism will be provided.

Familiarity with other languages, particularly Pascal and FORTH, would be an advantage, as would a general knowledge of electronics.

Salary is negotiable depending on age and experience. All applications will be treated in strictest confidence. To apply, send a CV to:

CT Victoria,  
Ron Harris, Managing Editor,  
Angus Specialist Publications Ltd,  
145 Charing Cross Road,  
London WC2H 9EE.

**It's easy  
to complain  
about  
advertisements.**

**The Advertising Standards Authority. ✓  
If an advertisement is wrong, we're here to put it right.**

ASA (at), Royal Free Hospital, Hampstead, London NW3 2PR

**NEW FROM**

# MICRODEAL SIX GREAT NEW PROGRAMS FOR THE DRAGON 32

## The Official **FROGGER**

SAFELY MANOEUVRE THE FROG TO ITS HOME WITHIN THE TIME GIVEN. CROSS THE HIGHWAY WITHOUT GETTING RUN OVER, AND CROSS THE RIVER WITHOUT FALLING IN. AVOID TRAFFIC, SNAKES, CROCODILES AND DIVING TURTLES.



IN MACHINE LANGUAGE FOR 1 TO 2 PLAYERS. £8.00

## Cuthbert Goes Walkabout

CUTHBERT IS BACK! THE LUCKY ANDROID HAS RETURNED FOR THE FROGGER. CROSS THE HIGHWAY, AVOID THE TRAFFIC, CROSS THE RIVER, AVOID THE SNAKES, TURTLES, AND CROCODILES. GET HIM HOME IN THE TIME GIVEN. AVOID THE TRAFFIC, SNAKES, TURTLES, AND CROCODILES. GET HIM HOME IN THE TIME GIVEN.



FOR 1 PLAYER. JOYSTICKS OPTIONAL IN MACHINE LANGUAGE. £8.00

## SPACE SHUTTLE

CAN YOU FLY THE WORLD'S MOST SOPHISTICATED VEHICLE LIKE MOST WORTHWHILE THINGS IT IS NOT EASY - AND THERE'S A LOT TO LEARN!



FOR 1 PLAYER  
JOYSTICK  
REQUIRED

£8.00

## Morocco Grand Prix

100 MILES OF TYRE SCREECHIN', CLUTCH BURNIN', WHEEL SPINNIN', GAS GUZZLIN' TRACK LIES AHEAD. AS YOU BATTLE YOUR WITS AGAINST THE REST OF THE FIELD IN THE MOROCCO GRAND PRIX. FOR 1 PLAYER.



JOYSTICK REQUIRED £8.00

## GOLF

IF YOU LIKE GOLF, THIS'LL BE JUST YOUR

CUP OF TEE. WITH A CHOICE OF CLUBS, WEIGHTS AND DIRECTIONS, SAND TRAPS AND DUCK PONDS (PLUS A BUILT IN 50% SLICE FACTOR, IT'S ALMOST AS GOOD AS THE REAL THING. "GOLF" HAS THREE LEVELS OF DIFFICULTY + HIGH RES. GRAPHICS GO ON. TAKE ON THE WORLD'S VERY BEST IN YOUR LIVING ROOM!! FOR UP TO 4 PLAYERS. JOYSTICKS NOT REQUIRED.



£8.00

Selected Microdeal Games are available from Books and John Menzies Stores with Computer Centres and Dragon 32 Dealers Nationwide, or order direct from:

## The Composer

THE COMPOSER IS A 4 VOICE MUSIC COMPOSER WHICH EASILY ALLOWS ONE TO DEVELOP HIGH QUALITY MUSIC. EACH VOICE IS PROGRAMMED SEPARATELY. IN ADDITION EACH VOICE USES ITS OWN WAVE SHAPE TABLE WHICH MEANS A UNIQUE SOUND FOR EACH OF THE 4 VOICES. THE COMPOSER FEATURES 7 OCTAVE RANGE AND SUPPORTS BOTH BEND, SOLOER, DOTTED NOTES AS WELL AS BRIGHT, CUEPETER AND STACCATO.



TRIPLET NOTES. THE COMPOSER ALLOWS MUSIC TO BE PLAYED IN ANY TEMPO OR KEY.

£15.00

41 TRURO ROAD, ST. AUSTELL  
CORNWALL PL25 5JE.  
TEL: 0726 3456



# MICRODEAL

**QUICKSILVER**  
**FREE GAMES**  
 WITH EVERY TAPE

# FREE UNIVERSE WITH EVERY TAPE\*

\*OFFER SUBJECT TO AVAILABILITY



**VELM MORN LAIR**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95



**SAULON**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95



**STELLA WITH THE BIRD**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95



**NO MYSTERY**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95



**SAULON**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95



**AQUAPLANE**  
 A game of strategy and tactics. You are a wizard who must defeat the evil forces of the underworld. Includes a manual and a strategy guide. £15.95

**AQUAPLANE** £15.95 Spectrum  
**SAULON** £15.95 Spectrum  
**VELM MORN LAIR** £15.95 Spectrum  
**STELLA WITH THE BIRD** £15.95 Spectrum  
**NO MYSTERY** £15.95 Spectrum  
**SAULON** £15.95 Spectrum  
**SAULON** £15.95 Spectrum

**THE GAME LORDS**

Quicksilver is the name of the company that makes these games. Total of quips (PQ) included. Check payable to Quicksilver Limited. Address: ...

Please send order to: **QUICKSILVER**, Palmerston Park House, 10, Palmerston Road, Southampton SO9 1LL. Send S.A.P. for Catalogue. Games are available through Books, Games, Gifts, Hobbies, Toys and all leading computer stores.